

REMARKS

Claims 7-8 have been rejected under 35 USC 102(e) as being anticipated by U.S. patent no. 6,297,549 ("Hiyoshi").

Claims 10-13, 15 and 18-20 have been rejected under 35 USC 102(b) as being anticipated by U.S. patent no. 6,118,177 ("Lischner").

Claim 9 has been rejected under 35 USC 103(a) as being unpatentable over U.S. patent no. Hiyoshi.

Claim 14 has been rejected under 35 USC 103(a) as being unpatentable over Lischner.

Claims 16-17 have been rejected under 35 USC 103(a) as being unpatentable over Lischner in view of U.S. patent no. 6,229,204 ("Hembree").

Claims 21, 23 have been rejected under 35 USC 103(a) as being unpatentable over U.S. patent no. 4,561,011 ("Kohara") in view of Lischner.

Claim 22 has been rejected under 35 USC 103(a) as being unpatentable over Lischner and Kohara in view of U.S. patent no. 6,215,670 ("Khandros").

Applicants respectfully traverse these rejections because the cited references do not disclose or suggest every element of any claim, as the following analysis shows.

Independent claims 7, 10 and 21 each recite top and bottom surface buildup layers disposed on an exposed portion of a thermally conductive substrate core. Hiyoshi does not disclose or suggest these limitations for at least 3 reasons:

- 1) The Office action equates Hiyoshi's item 31 with a thermally conductive core. In fact, item 31 is a ceramic substrate (col. 6 line 53). Ceramics are well known as thermal insulators and are not thermally conductive as the claim requires.
- 2) The Office action further equates Hiyoshi's items 331, 332 as the surface buildup layers. In fact, items 331, 332 are metal plates that are formed first and then bonded onto ceramic substrate 31, not layers that are built up on the ceramic substrate.
- 3) The Office action equates item 38 as part of a heat spreader. In fact, Hiyoshi's item 38 is also ceramic (col. 7 lines 61). As previously noted, ceramics are well known as thermal insulators and would be completely ineffective as heat spreaders.
- 4) Lischner does not connect a heat spreader to an exposed portion of a thermally conductive core, while Hiyoshi does not connect anything to a thermally conductive core.

In summary, the elements disclosed by Hiyoshi and Lischner do not equate to the elements of the independent claims. The remaining references (Hembree, Kohara, Khandros) were cited against dependent claims for other reasons, and do not provide these missing limitations.

The remaining pending claims depend from claims 7, 10 and 21, and therefore contain the same limitations not disclosed or suggested by the cited references.

CONCLUSION

For the foregoing reasons, Applicant submits that the application is now in condition for allowance, and indication of allowance by the Examiner is respectfully requested. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. If any fee insufficiency or overpayment is found, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

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